

Serial No. 09/748,036 - Rojas et al.

#### REMARKS

Claims 1-14, 40, and 41 are of record in this application. Non-elected claims 15-39 have been canceled, and new claims 40 and 41 have been added. No claims have been amended.

Support for newly presented claims 40 and 41 is inherent in the disclosure. The claims are merely drawn to the species recited in original Markush claim 14. See paragraph 0018 on page 5 of the specification.

#### Restriction Requirement

Non-elected claims 15-39 have been canceled without prejudice. Applicants reserve the right to file one or more Divisional applications drawn to the subject matter of these non-elected claims.

#### Election of Species

In response to the Requirement for Election of Species dated May 20, 2003, Applicants elected the species **uric acid**. Applicants note however, that the prior art rejection contained within the current Office Action mailed July 21, 2003 appears to be drawn to the species urea and benzoylphenylurea. The prior

Serial No. 09/748,036 - Rojas et al.

art relied upon only discloses these two species. The Office action, like the references, is silent with respect to uric acid.

Applicants request clarification on the status of the elected species uric acid. Has this species been examined and found to be free of the prior art, or has the Examiner taken the position that this species is obvious over the prior art (*i.e.*, is it included in the rejection under 35 U.S.C. 103)?

Rejection Under 35 U.S.C. 112

Claims 1-14 have been rejected under 35 U.S.C. 112, second paragraph, as indefinite. The Examiner has taken the position that the phrase "less than about" 1,000 ppm is indefinite. Applicants respectfully disagree.

It is well established that the use of relative terms does not automatically render a claim invalid. A discussion of the factors to be considered when applying 35 U.S.C. 112 to the use of the relative term "substantially" was provided by the CAFC in *Seattle Box Co. v. Industrial Crating & Packing, Inc.* (CAFC 1984) 221 USPQ 568. In *Seattle*, the CAFC held that the use of "substantially" was not indefinite, stating that:

Serial No. 09/748,036 - Rojas et al.

"When a word of degree is used the district court must determine whether the patent's specification provides some standard for measuring that degree. The trial court must decide, that is, whether one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification."

The Court further held that the specification need not set precise limits, and that the claims are patentable under §112 even if some experimentation was required to determine the limits of the claims (page 574). Reaching a similar conclusion, the CCPA held that the use of substantially was not indefinite under §112 in *In re Mattison and Swanson* (CCPA 1975) 184 USPQ 484. As described therein, the CCPA concluded that neither the claims nor the specification need specify numerical limits for what was considered "substantial". Rather, the specification need only set forth general guidelines sufficient to allow a skilled practitioner to make a proper choice of the claimed components:

"Hypothesizing whether an increase in efficiency of 3%, 30%, or 300% is necessary for said increase to be classified as substantial is not determinative of the issue of whether the claims satisfy 35 U.S.C. 112, second paragraph."

See also *In re Swinehart and Sfiligoj* (CCPA 1971) 169 USPQ 226, 230.

Serial No. 09/748,036 - Rojas et al.

Since the decisions of *Seattle* and *Mattison* the CAFC has continued to allow Applicants to use these and other terms of degree where one of ordinary skill in the art would understand what is being claimed. Most notably, in *Andrew Corp. v. Gabriel Electronics* (CAFC 1988) 6 USPQ2d 2010 at 2012-2013, the CAFC held that terms such as "close to", "substantially equal", "closely approximate", and **"about"** [the latter referring to *W.L. Gore & Assoc. Inc. v. Garlock Inc.* (CAFC 1988) 6 USPQ2d 1277 at 1282] were not indefinite, even though they are not precisely defined. See also *BJ Services Co. v. Halliburton Energy Services, Inc.* (CAFC 2003) 67 USPQ2d 1692, wherein the CAFC again held that use of the term "about" was acceptable. All of these terms are acceptable because those skilled in the art would be reasonably apprised of the invention and its scope.

Returning to the claims at issue, the term "about" does not stand alone, but is used to describe the upper limit of the concentration of the claimed nitrogen containing compounds in a composition (which composition is used to stimulate termite feeding or mask other compounds from termites). Specifically, the specification discloses, and the claim recites, that the

Serial No. 09/748,036 - Rojas et al.

"concentration of said nitrogen compound in said composition is less than or equal to about 1000 ppm". Applicants respectfully submit that a practitioner skilled in the art would fully understand what is intended by the claim language and that the claim fully satisfies the requirements of 35 U.S.C. 112, second paragraph.

Rejection Under 35 U.S.C. 102

Claims 1-11, 13, and 14 have been rejected under 35 U.S.C. 102(b) as being anticipated by Sbragia et al. Applicants respectfully disagree.

Sbragia et al. (hereinafter referred to as Sbragia) discloses benzoylphenylurea compounds (shown in Formula II on col. 2) which are useful as termiticides. As described at col. 6, line 50 to col. 7, line 10, the compounds are toxic to termites, causing mortality even at very low dosages. The pesticidal compositions of the compounds may be formulated with a variety of solid or liquid phase carriers (col. 9, lines 3-6). The reference does not disclose or suggest that the benzoylphenylurea compounds nor any other nitrogen containing

Serial No. 09/748,036 - Rojas et al.

compounds may be used to stimulate termite feeding or mask the presence of other unattractive compounds.

Applicants' claimed invention is drawn to a method for aggregating termites to a desired location by providing a composition which comprises less than or equal to about 1,000 ppm of a nitrogen containing compound which is an ammonium salt or amine containing compound (exclusive of natural amino acids, polypeptides, or proteins). The amount of the nitrogen containing compound provided is effective to stimulate termite feeding and/or mask the unattractiveness of other compounds, but is not so great as to be termiticidally effective. Applicants have unexpectedly discovered that the affinity or aggregation of termites to these nitrogen containing compounds is significantly increased when they are used at concentrations less than or equal to about 1,000 ppm (i.e., 0.1%, by weight), in comparison to the use of the same compounds at higher levels, particularly greater than or equal to 2500 ppm. Moreover, Applicants have further discovered that at these low levels, the nitrogen containing compounds are also effective for masking or camouflaging the presence of a wide variety of compounds from the termites (such

Serial No. 09/748,036 - Rojas et al.

as insecticides, termite growth regulators, and colorants) which are normally repellent to subterranean termites. This is not disclosed or suggested by Sbragia.

As noted above, the benzoylphenylurea compounds of Sbragia are disclosed for use as pesticides for controlling insect pests, including use as a termiticide for controlling termites (col. 1, line 38 to col. 2, line 2). No other utilities are disclosed, and all of the formulations disclosed by Sbragia are drawn to pesticidal compositions. The compounds are applied in amounts effective to control the termites by killing or inducing mortality (see col. 6, line 50 to col. 7, line 9). In contrast, the instant claims expressly preclude pesticidal amounts of the nitrogen containing compounds. Claim 1 requires that the "the nitrogen containing compound is **not** present in a termiticidally effective amount" (emphasis added). Thus the instant claims do not encompass the method of Sbragia and the claims are not anticipated.

In addition to the comments *supra*, a practitioner of ordinary skill in the art would have no reason to modify the methods of Sbragia to arrive at the claimed invention. Again,

Serial No. 09/748,036 - Rojas et al.

the disclosed intent of Sbragia is to apply the compounds as a pesticide. The reference does not disclose or suggest that the compounds have any efficacy beyond their use as a pesticide. The skilled practitioner would have no motivation to apply the compounds of Sbragia or any other claimed nitrogen-containing compounds in amounts which were not termiticidally effective. To do so would be contrary to the express teachings of the patent.

Finally, Applicants note that claim 14 is limited to a Markush group of urea or uric acid. Clearly, neither of these compounds are disclosed or suggested by Sbragia.

Rejection Under 35 U.S.C. 103

Claims 1-3, 5, 6, 8, 9, and 12-14 have been rejected under 35 U.S.C. as being unpatentable over McPherson et al. in view of Henderson et al. The Examiner has taken the position that it would have been obvious to modify the termite bait of McPherson et al. by adding urea thereto as disclosed by Henderson et al. Applicants respectfully disagree.

McPherson et al. (hereinafter referred to as McPherson) disclosed extracts from fungi which were effective to stimulate termite feeding. The reference disclosed that the extracts



Serial No. 09/748,036 - Rojas et al.

appeared to contain a plurality of different active compounds (col. 11, lines 22-25). However, the structures of the active agents were not determined, other than speculation that the agents contained hydroxyl groups which were necessary for activity (col. 12, lines 28-32). The reference further disclosed that the extracts may be added to conventional termite baits.

Henderson et al. (hereinafter referred to as Henderson) disclosed that the addition of urea or three L-amino acids to termite baits may increase the acceptance of the baits by Formosan termites. With respect to urea, corrugated cardboard disc baits were soaked in either 0.1%, 0.5%, 1.0%, 2.0%, 4.0%, or 8% solutions of urea (w/v), dried, placed into plastic petri dishes with Formosan termites, and incubated. Following incubation, the discs were weighed to determine weight change as a measure of termite consumption (page 2 of the publication). Henderson disclosed that those discs soaked in 1.0%, 2.0%, 4.0%, or 8% solutions of urea exhibited significantly greater consumption by the termites relative to untreated controls, and that bait consumption increased with higher urea concentrations (page 3). However, the publication further disclosed that discs

Serial No. 09/748,036 - Rojas et al.

soaked in 0.1% and 0.5% solutions of urea were not consumed to a significantly greater extent than the untreated controls (page 3). No statistically significant increase in termite feeding was observed following addition of these low concentrations of urea to the baits. The reference did not disclose the concentration or amount of urea which was retained in the cardboard disc baits following soaking in the various solutions.

The instant invention was described *supra*.

Applicants submit that even if the references were combined as suggested by the Examiner they still would not arrive at the claimed invention. Rather than suggesting the use of low concentrations of urea, less than or equal to about 1,000 ppm as claimed, Henderson would suggest using much higher concentrations of urea. Indeed, if anything, Henderson would actually teach away from the claimed concentrations less than or equal to about 1,000 ppm of urea.

As noted above, Henderson disclosed that only discs soaked in 1% or higher urea solutions exhibited increased feeding by termites; soaking discs in the 0.1% and 0.5% urea solutions did not increase their consumption by the termites. Thus, even if

the references were combined as suggested, at most Henderson would only suggest adding solutions containing the higher levels of urea, i.e. greater than or equal to 1% urea, to termite baits. Most certainly, a practitioner of ordinary skill in the art would have no motivation to add Henderson's solutions of 0.1% or 0.5% urea to termite baits as the reference disclosed that these low concentrations were ineffective to stimulate feeding.

However, although Henderson disclosed the concentration of urea in each of the solutions used to treat the cardboard disc baits, the authors did not determine the actual concentration or amount of urea which was retained in the discs. Thus, reference did not expressly disclose the concentration of urea in the discs which was necessary to effectively increase termite consumption. In an effort to determine the concentration of urea which Henderson would suggest as being necessary to increase termite consumption of a bait, Applicants have repeated the process described in Henderson and calculated the urea concentrations retained in the cardboard disc baits. The preparation of the discs and the calculation of the urea concentration retained in

Serial No. 09/748,036 - Rojas et al.

the discs are described in the enclosed Declaration Under 37 CFR 1.132.

As set forth in the Declaration, inventor Guadalupe Rojas prepared 0.1% and 8.0% urea solutions and corrugated cardboard discs of the same size as described in Henderson. The discs were then soaked in the solutions following the same conditions and times described in Henderson and immediately weighed. The weight of solution retained in the discs was determined from the difference in the weight of the discs while wet and dry, and the amount of urea in the discs was then calculated. Finally, because the amount of urea retained in the discs should be approximately proportional to the concentration of urea in the soaking solutions, the concentration of urea retained in discs soaked in each solution, including the 0.5% and 1.0% solutions, may be readily predicted. Following this procedure, declarant Rojas determined that the predicted concentration of urea retained within the discs soaked in the 0.5% solution of Henderson would be approximately 3,435 ppm, while the predicted concentration of urea retained within the discs soaked in the 1% solution of Henderson would be approximately 6,870 ppm.

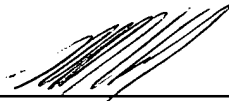
Serial No. 09/748,036 - Rojas et al.

Returning to the disclosure of Henderson, again the reference disclosed that discs soaked in the 0.5% urea solution did not exhibit an increase in termite feeding. Because these discs would be predicted to contain approximately 3,435 ppm urea, the reference would suggest that in order to increase termite feeding upon a bait, the concentration of urea added to the bait should be greater than this amount. Thus, a practitioner of ordinary skill in the art would have no motivation to add urea to a termite bait in an amount less than or equal to 3,435 ppm. However, the instant claims are limited to the use of urea concentrations less than or equal to about 1,000 ppm. This is significantly lower than the 3,435 ppm level suggested by Henderson and would not be obvious. Applicants' discovery that concentrations of urea less than or equal to about 1,000 ppm are effective for stimulating termite feeding and/or masking the presence of other compounds which are unattractive to termites is totally unexpected.

Serial No. 09/748,036 - Rojas et al.

For the reasons stated above, claims 1-14, 40, and 41 are believed to satisfy the requirements of 35 U.S.C. 112 and distinguish over the prior art of record. Allowance thereof is respectfully requested.

Respectfully submitted,



---

Randall E. Deck, Agent of Record  
Registration No. 34,078

Peoria, IL

309/681-6515

FAX: 309/681-6688

202/720-2421

Enclosure

--Declaration under 37 CFR 1.132 by Guadalupe M. Rojas (8 pages)